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ABSTRACT

The document reports a pilot test of the feasibility of the MISOE Census Data System (CDS) for estimating the costs of individual programs in a regional vocational school setting. The test determined that the data collection forms can be completed by a regional vocational school but that they can be simplified, and the costs of individual programs can be determined from the data collected. As the system is structured to be applicable to all schools offering occupational programs, this determination implies that per-pupil costs for individual programs would be available to school managers within-school analysis and between-schools comparisons, and, used with program evaluation data, would provide a basis for cost-benefit and cost-effectiveness studies to be conducted on an operational scale. The balance of the report is directed to describing the mechanics of estimating the costs of individual occupational programs in a typical regional vocational school and is supplemented with general discussions of analyses of program costs and implementation alternatives. Fifteen pages of tables are appended. (Author/AJ)

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CDS DOCUMENT #10

FIELD TEST RESULTS

of the

MISOE PROGRAM COST ACCOUNTING SYSTEM

for

OCCUPATIONAL PROGRAMS

AUGUST, 1975

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INTRODUCTION

The principal objective of this effort was to pilot test the feasibility of the MISOE Census Data System in estimating the costs of individual programs in a regional vocational school setting. The determination of costs of individual programs such as, auto mechanics, carpentry, etc. in a manner that can be applied to all schools offering occupational programs would represent a major development. Such a development implies that per pupil costs for individual programs would be available to school managers for within school analysis and would allow comparisons to be made among schools. These program costs, if used with program evaluation data, provide the basis for cost-effectiveness to be determined on a program basis - an extremely valuable management decision-making tool.

While previous studies done in Massachusetts by Forbes (1) (1970), Corazzini (1966) (2), and Downey (1970) (3), demonstrated the feasibility of determining costs of occupational programs and cited procedures for the analysis of cost-benefits and cost-effectiveness, they were academic efforts in nature in that the procedures were not systematized for general application to all schools. The MISOE Census Data System was developed to employ

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(1) A Technique for Analyzing the Costs of an Educational Program Based on Behavioral Stated Objectives - R. H. Forbes, September, 1970, Dissertation, University of Massachusetts Graduate School of Education.

(2) Vocational Education - A Study of Benefits and Costs, August, 1966, A. J. Corazzini, Industrial Relations Section, Princeton University, Princeton, New Jersey.

(3) A Cost-Benefit Study of Vocational Education in Haverhill, Massachusetts, G. F. Downey, June, 1971, Dissertation, Boston College Graduate School of Economics.

the principles generated by these studies in the determination of program costs and it is structured in a way that is applicable to all schools offering occupational programs.

A secondary objective of this field test was to determine if the financial and nonfinancial data as they are collected by the reporting instruments are sufficiently integrated to provide a basis for cost-benefit and cost-effectiveness studies to be conducted on an operational scale.

The balance of this report is directed to describing the mechanics of estimating the costs of individual occupational programs in a typical regional vocational school and is supplemented with general discussions of analyses of program costs and implementation alternatives.

Institutional Setting of the Test

The pilot test of the MISOE Census Data System was conducted in a typical regional vocational school setting. The school serves four member communities, two of which supply 80% of the students to the school. These communities are located in a suburban area near a central city with each community supporting its own regular high school, each of which include occupational programs in the business/office education. Students requiring programs in the traditional occupational areas are served by the regional vocational school.

The test school offers sixteen occupational programs and has a regular day school enrollment of approximately 700 and includes a special education program for about 20 students. Over 1,200 are enrolled in evening classes, 75% of which are in occupational program areas and the remainder in evening practical arts programs. Tables I and II summarize the total school enrollment by grade, program areas (Table I) and by individual occupational and other programs (Table II).

It is noted that this school is comprised of three separate buildings. There is a main building which houses the majority of the programs, an annex which services three programs, and a community service building which services a community service clustered program. Capital costs which are associated with each building effect the total cost of each program and are hence considered in the process of determining the costs of the programs housed within them.

Since the 1974-75 school year was not completed when the data for this test was collected, the school budget for the fiscal year ending June 30, 1975 was utilized to collect financial data. Thus, it is noted that the reported expenditures are estimates of actual figures which would be reported by the school in the End-of-Year Pupil and Financial Report on or about August 1, 1975. Budgeted figures were considered to be of sufficient accuracy in the determination of program costs to be used for comparative purposes but obviously would be improper to be used for accounting purposes.

PROCEDURE FOR ESTIMATING THE COSTS OF PROGRAMS

The following outline enumerates the steps involved in estimating the costs of individual occupational programs. These steps differ somewhat from those discussed in the "MISOE Census Data System Guidelines and Instructions for Reporting" booklet, pps. 41-68 because of the fact that budgeted figures were utilized in this field test and not those from the End-of-Year Pupil and Financial Report. The process is similar, however, and the use of budgeted data offers some advantages as well as disadvantages. The ramifications are discussed below in the section "Conclusions and Implementation Alternatives".

(1) Obtain aggregate budgeted expenditures (1000-9000 accounts) for the school and also capital expenditure data on buildings and equipment.

(2) Break out direct and indirect expenditures for all program areas, such as Occupational Day, Special Education and Adult.

(3) Determine per pupil instructions, supportive and capital cost of training for each program area.

(4) Prorate indirect expenditures to program areas.

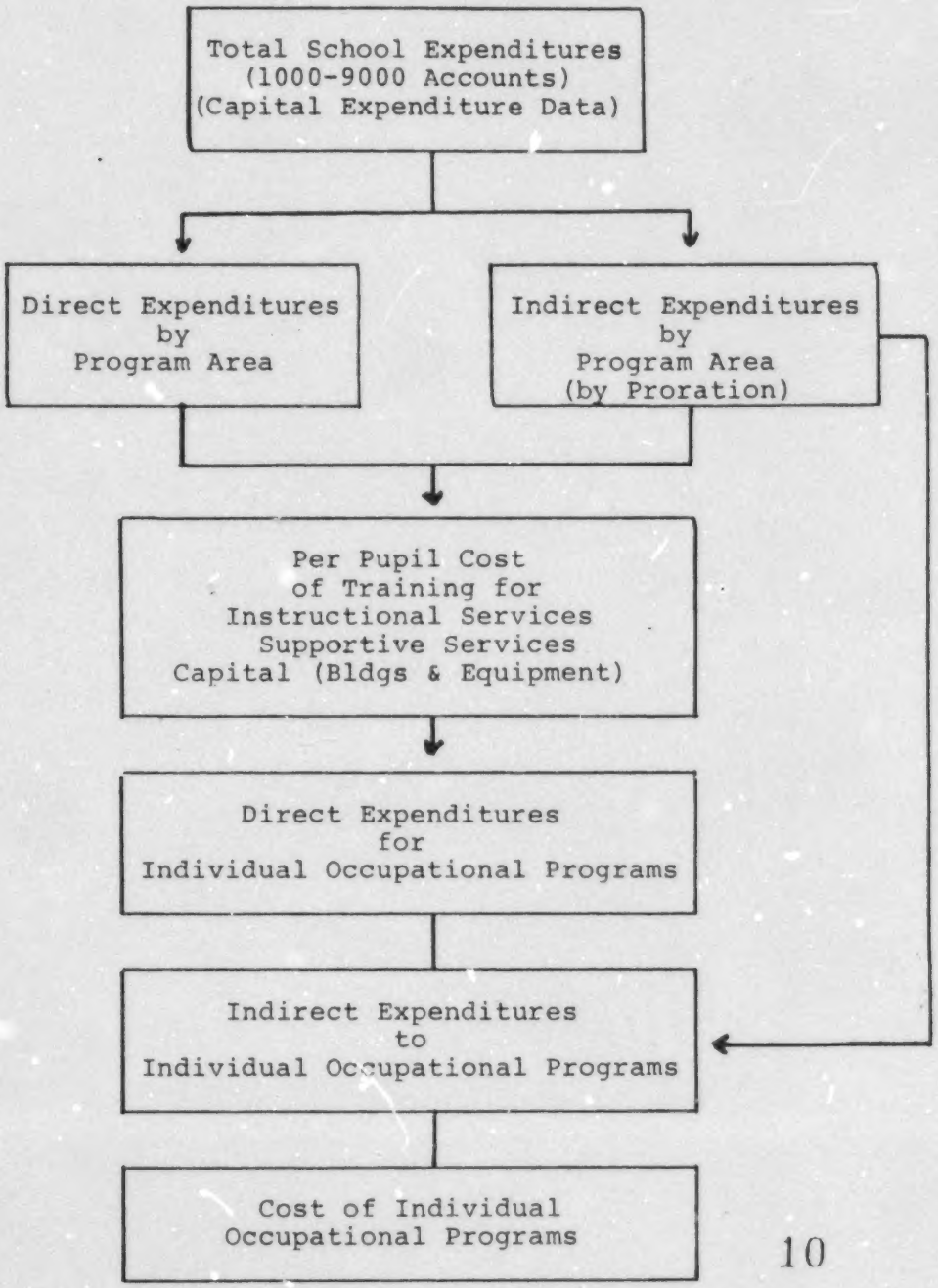
(5) Determine direct expenditures for individual occupational programs such as auto mechanics, carpentry, etc.

(6) Prorate indirect expenditures for individual occupational programs.

(7) Determine cost of individual occupational programs.

The flow chart given in Figure 1 is provided to describe this process.

Figure 1. Flow Chart of Process for the Determination of Individual Occupational Program Costs



Aggregate School Expenditures (1000-9000 Accounts) - Aggregate expenditures for the school, in this case also the LEA, were obtained from the 1974-75 school budget for each expenditure account (1000 through 9000). These figures are reported in Table III and represent completion of Steps 1 and 2 which were cited above. The estimated total school expenditures for these accounts for the 1974-75 school [illegible] $1,876,577. It is noted that this figure includes [illegible]ts budgeted for both the current expenditures for the 1000 through 5000 accounts (instructional and supportive services) and also for other expenditures for services classified by the 6000 through 9000 accounts.

Direct and Indirect Expenditures - Direct expenditures are those that can be specifically associated with a particular program area or with an individual program. They generally include teacher salaries, program supervisory salaries, supplies, textbooks, and other miscellaneous expenditures that are readily identifiable as being directly associated with the given program.

Expenditures that cannot directly be associated with a program area or to an individual occupational program are considered to be indirect expenditures and as such they are prorated to programs by means of proration formulas which distribute these expenditures percentage-wise across the various programs. (Reference pgs. 41-68 "MISOE Census Data System Guidelines and Instructions for Reporting" booklet for a discussion of procedures for estimating program costs).

Tables IV, V, and VI break out the total school expenditures into direct and indirect categories for three program areas in which occupational training is offered in the subject school. These program areas are occupational day, occupational evening and special education. The breakouts to each area were made for each account category specified in the End-of-Year Pupil and Financial Report and the totals are summarized below for the 1000 to 5000 accounts, or the total current expenditures. It is noted that the total current expenditures only include those incurred for instructional and supportive services. They do not include capital cost expenditures.

Program Area	Total Current Expenditures	Total Direct Expenditures	Total Indirect Expenditures
Occupational Day	$1,372,003	$695,866	$676,137
Occupational Evening	69,259	30,250	39,009
Special Education	57,375	48,945	8,430

Proration Methods - Three formulas have been utilized to prorate indirect expenditures to the various program areas and to the individual occupational programs offered in the subject school.

The first formula is applied to distribute expenditures that relate to the total school enrollment and is based on the student contact hours. It is used to prorate the following expenditures:

2200 - Total Principal's Office
2600 - Total Audio-Visual Services
5000 - Total Final Charges

This formula determines the student contact hours for each program area as a percentage of the total student contact hours for the entire school. These percentages when multiplied by the aforementioned experditures yield an estimate of the percentage of the expenditure that can be applied to the given program area. Table VII summarizes the calculated percentages for each program area of the total school.

The second formula is applied to distribute expenditures that relate to the day school enrollment only and is also based on student contact hours. It is used to prorate the following expenditures:

2500 - Total Library Services
2700 - Total Guidance Services
1000 - Total Administrative Services
3000 - Total Other School Services

This formula determines the student contact hours for the day school programs only as a percentage of the total day school contact hours. These percentages when multiplied by the aforementioned expenditures yield an estimate of the percentage of the expenditure that can be applied to the given program area. Table VIII summarizes the calculated percentages for each program area for the day school.

The third formula is applied to distribute expenditures that relate to use of the buildings and facilities and is based both on the actual floorspace and also on the percentage of

student contact hours which each program area utilizes the facilities. It is used to prorate 4000 account expenditures, concerned with the total operations and maintenance of plant services.

This formula first determines the percentage of the total floorspace for each building in the school complex. Table IX summarizes this data and it is noted that 86.5% of the instructional area is in the main building, 2.2% is in the community services building, and 11.3% is in the annex.

The second step is the determination of the number of student contact hours for each building by program area. Table X summarizes this data.

Table XI summarizes the actual proration for the 4000 account expenditures of $163,476 to each building and to each program area. Having so allocated the 4000 account expenditures to each building in the complex it is possible to now determine the cost per student contact hour for the maintenance and operation of these buildings. These costs are given below:

Cost per Student Contact Hour by Building			
Building	Total Cost of Operations	Total Student Contact Hours in Building	Cost per Student Contact Hour in the Buildings
Main	$141,407	778,890	$0.1815
Community Center	3,596	27,495	0.1307
Annex	18,473	71,190	0.2594
Total	163,476	877,575	0.1862

With cost per contact hour determined, it is now possible to calculate the costs of plant operations and maintenance for individual occupational programs on a per pupil basis depending on the contact hours students have in each building for their occupational and their academic training. Following are the costs per pupil for each building that can be allocated in the determination of individual program costs.

Building	Per Student Cost (4000 Account)
Main	$212.61
Community Service	175.78
Annex	259.08

Capital Expenditures - The calculation of the capital cost for the school was based on the insurance value of the building and equipment. It is noted that a 6% interest charge based on the current yield on municipal bonds was used to represent the opportunity cost for the use of public funds.

The estimated total capital expenditures (including the interest charge) was $455,065 or $0.5185 per student contact hour. The capital cost was then determined for each program area by multiplying the student contact hours for the program area by the cost per student contact hour and the total capital expenditure for each area are as follows:

Occupational Day	$400,386
Occupational Evening	47,365
Special Education	7,272

It is noted that there is no difference in costs within program areas because it is not possible to distinguish the allocation of capital to the individual programs.

PROGRAM COSTS

Tables IV, V, and VI contain the expenditures for the three program areas offered in the test school. Two of these program areas, namely, occupational day and occupational evening include individual occupational programs within them for which it is desirable to determine the operating costs of each. The other program area, special education, consists only of one program and hence poses no difficulty in assigning costs to the individual program because the program area costs and the individual program costs are one and the same.

Occupational Day Programs - Table IV contains the aggregate expenditures for all occupational day programs offered in this school and give totals for instructional services ($918,490), supportive services ($453,513), and capital expenditures ($400,386). In addition, per pupil costs have been determined for several categories and are given below:

(1) the instructional cost of training ($1,392)

(2) the supportive cost of training ($687)

(3) the current cost of training ($2,079)

(4) the capital cost of training ($607)

(5) the total cost of training ($2,686)

With the program area costs thus determined, it is possible to distribute these costs to the individual occupational programs that are offered within this area.

Table XII summarizes the estimated costs for all 16 programs that are offered as part of the day program. It is noted that the programs are grouped by the building in which each is principally housed. The information contained in this table includes direct expenditures taken from department expenditure records, and indirect expenditures which were prorated to each program by the methods previously specified. In addition, per pupil costs are included for instructional, support, and capital cost of training. Total per pupil costs are reported for each program for comparative purposes.

Occupational Evening Programs - Approximately 10.4% of the total student contact hours are absorbed by the evening school although there are almost two times the number of students in the evening programs as there are in the day school. The classes meet 3 or 6 hours per week for twenty-five weeks.

Table V summarizes the estimated expenditures for the evening programs as collected by the MISOE reporting booklets. It is noted that only $70,000 out of the total current expenditures of $1,800,000 are expended in the evening school which results in a per pupil cost of training of approximately $56.86, compared to over $2,000 for the day school programs. It is also noted that of the 1,218 students enrolled, 932 are enrolled in occupational programs whereby the remaining 286 are enrolled in evening practical arts classes. The estimated per pupil costs are calculated for each of these areas and are reported at the bottom of Table V. It is possible to obtain a closer estimate

of the costs of individual occupational evening programs by relating the professional salaries as direct expenditures and applying the indirect expenditures on a per pupil basis for all other expenditure categories. This process was not followed through due to the generally low cost of the programs.

Special Education - The estimated expenditures for the special education program are reported in Table VI. There is no breakout of expenditures by individual programs because of the fact that there is only one program offered in this category.

ANALYSIS OF PROGRAM COSTS

The purpose of this section is to compare and analyze program costs and to discuss how such information can be used in the management of occupational education.

Comparison of Program Areas - Table XIII is a summary comparison of per pupil costs by program areas. Per pupil costs have been determined for instructional services, (line 2) supportive services, (line 3) and for capital expenditures (line 5) for each program area. From these determinations, the current cost of training (instructional costs plus supportive services costs) have been calculated (line 4) and also the total cost of training (line 5)(current costs plus capital costs).

It is evident that the cost of operating the evening school programs is substantially lower than the day school operations on a per pupil basis and also on an aggregate basis, the total current expenditures being $1,372,003 for the day school and $69,259 for the evening school.

An examination of the evening school programs reveals several reasons for this large difference in per pupil costs. The salaries paid to the evening school teachers are relatively low compared to the day school and there are few, if any, supportive services or supplies charged to the evening operation. These expenditures are applied to the day school even though the evening programs may benefit from them somewhat. In addition, the structure of the evening programs are such that the student contact hours are low. (75 or 150 hours per course per year).

Programs meet one or two evenings per week for three hours for twenty-five weeks, thereby making the facilities available for a greater number of students than the day school program structure can accommodate. Further, while the evening students use the equipment and rooms that are already available, they do not consume a large amount of the capital costs because of the low number of contact hours required of the evening students.

It is noted that the costs of the special education programs are quite high in comparison with the other program areas. This is principally due to the very low enrollment compared to the expenditures which the program incurs.

Comparison of Individual Programs - Table XII displays the costs of individual programs within the occupational day program area. The individual occupational programs are grouped by the building in which occupational training was offered, (Main, Annex, Community Service Buildings). It is important to note that past studies (1) have indicated that the factors that most strongly influence the per pupil current costs (instructional and supportive services) of individual occupational programs are teachers' salaries and the pupil/teacher ratios. Low enrollment programs tend to be, on the average, high cost programs. In the occupational day program area, the Painting & Decorating program (8 students) and the Food Management program (7 students) are good examples of these influences. The per pupil current cost of training in Painting & Decorating is $2,783 and in Food Management it is $3,308.

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(1) op. cit. G. F. Downey p. 95

Another instance of a high cost program is Business Data Processing where the per pupil current cost was $3,349. The high per pupil cost of this program is not due to low enrollment, (enrollment is 34), but is due to the rental cost of specialized equipment needed to provide relevant training in this occupational area.

At the other extreme, carpentry, the highest enrollment occupational day program has the lowest per pupil current cost of training ($1,846 per pupil). It should be pointed out that this program has the highest teaching salaries ($47,278) of any occupational day program. This indicates that it is not only the amount of teacher salaries alone that causes high cost programs but that the pupil/teacher ratio is an important influence. It also appears that the costs per pupil of individual programs are influenced by the position of their faculty in the pay scale rank. The higher cost programs tend to be the ones in which the faculty are at the maximum in the pay scale or very close to it.

It should also be pointed out that certain programs contribute services to the school and to the communities it serves which are not reflected in a reduced cost of the programs. For instance, the Graphic Arts Department does printing for the school and other local public agencies such as tax bills, water bills, brochures, etc. The Food Management and Services program generates income from food sales and the Business Data Processing Department performs services in preparing class schedules, grades, payroll, etc.

Individual Program Costs and Terminal Performance Objectives - As is shown in Table XII, the costs of individual programs vary considerably. It is extremely difficult, if not presently impossible, to make meaningful comparisons of individual occupational program costs within a school or among schools in the absence of some convenient means of describing the outcomes of the programs. Because the type of training and the effectiveness of programs vary considerably, an individual program in a particular school may be substantially higher in per pupil cost when compared to a similar program in another school. However, in reality the higher cost program may be training students in skill areas or clusters of skills that are not being offered by lower cost programs described by the same name. It may be that the added costs are well justified in terms of higher productivity and increased student achievement levels and general cost comparisons across program may be misleading without accompanying specifications of individual skills offered by the programs that are being compared. Thus, in order to have a sound basis for comparison, educators in the decision-making process should have knowledge of the nature of the program in terms of specific skills offered as well as costs on a per pupil basis.

The application of terminal performance objectives (TERMOBs) is one convenient means whereby educators can define the skills being taught within a program and that can be used as a basis for justifying or rationalizing cost differences. For example, the per pupil current cost for training an auto mechanic in the test

school is approximately $2,164 in one year. The program produces about 13 auto mechanics per year, each graduate having been taught 56 specific skills or TERMOBs. When this cost is compared to an auto mechanics program offered in another school at a per pupil current cost of $3,200, it would be hasty to conclude that the higher cost program was operating inefficiently without examining and comparing the numbers of students produced and the skills offered by each program. It may be the case that the higher cost programs can be justified because special needs students are being served in addition to regular students. The special needs students would require special teachers as well as specialized or modified equipment in order to train them with entry level skills. Or it may simply be a case where the higher cost programs teach more skills and thus costs more. The added cost may be justified in terms of greater job opportunities for these graduates. Thus, when TERMOB data is merged with cost data, a basis for rational analysis is available to the educator decision-maker to determine if the educational outcomes are worth the added expense.

CONCLUSIONS AND IMPLEMENTATION ALTERNATIVES

Conclusions - The pilot testing of the total MISOE Census Data System demonstrated:

(1) that the data collection forms can be completed by a regional vocational school, and

(2) that the costs of individual programs can be determined from the data collected.

It was found, however, that many of the forms can be simplified to facilitate the collection of the data and could be designed in a more convenient way to facilitate the actual calculation of program costs.

Far too much data is being required on a census basis than is necessary to estimate program costs and in many instances the data is excessively and unnecessarily cross-linked making it more difficult than it need be to complete the forms. On the other hand, it was found that insufficient data is being requested to describe other than regular day programs, i.e., evening and summer. For example, neither utilization data on the students' class time, nor of the buildings is requested for evening and summer school.

Implementation Alternatives - Because of the timing of this test, it was necessary to use budgeted financial data for the determination of program cost estimates, whereas MISOE-CDS calls for financial data reporting to take place at the end of the year when final expenditure data is available from the End-of-Year

Pupil and Financial Report. Upon reflecting on this situation, it is clear that the collection of budgeted data at the beginning of the year, although the data may be approximate, does offer certain advantage to a school manager to have program cost estimates at the beginning of the year as opposed to the end. The advantage is that the manager having such data at the beginning of the school year could place into operation alternatives during that year in an effort to reduce the costs and/or increase program and cost effectiveness. An increase in program enrollment will tend to decrease per pupil cost of training. On the other hand, an increase of the number of skills offered may render the program more cost-effective, thus justifying the high cost of the program. Having such data after the fact would simply postpone the decision for another year at which time the circumstances may not be the same.

Under this situation proration decisions involving cost distributions of indirect expenditures would not be made by the school but by the Department of Education utilizing enrollment and floorspace data collected in the Fall Reports as the basis for the prorations. The disadvantage of this process is that corrected data would have to be collected at the end of the year in order to provide accurate accounting data on a program basis. On the other hand, having accurate program cost information on a census basis at the end of the year which would reconcile with the End-of-Year Pupil and Financial Report could provide a means to control Chapter 74 reimbursements.

High cost programs, when identified, can be examined by both State and Local administrations and determinations can be made relative to the programs worth in the light of costs. It is plausible that approval of programs reimbursed under Chapter 74 can be based on program cost and program output criteria jointly established by State and Local agencies. In this manner inefficient programs may be evaluated on an annual basis and disapproved by the State if the LEA does not meet the criteria within a time limit. Thus, the 'blank check' nature of the current Chapter 74 reimbursement procedures could be corrected to exclude continued State support of inefficient programs at considerable savings to the taxpayer.

There are many alternatives available for implementation of the MISOE cost system depending on the current informational needs of management as they perceive them. The MISOE Census Data System has been flexibly designed and is adjustable to changing needs.

TABLE I

Total School Enrollment, (Oct. 1)
by Grade, and Program Area

Grade	Male	Female	Grade Total
9	152	30	182
10	132	31	163
11	152	20	172
12	117	23	140
Post Graduates	1	2	3
Special Program	17	-	17
Total Secondary Programs	571	106	677
Adult Program	-	-	1,218

SOURCE: MISOE CDS Booklet 1.0, Table 1.11

TABLE II

Occupational Day & Evening School Enrollment
(Oct. 1) by Individual Programs

Program	USOE Code	Occupational Enrollment Day	Evening
1. Auto Mechanics	17.0302	56	110
2. Auto Body & Fender	17.0301	39	70
3. Commercial Art	17.0700	36	80
4. Gen. Merchandising	04.0800	16	16
5. Carpentry	17.1001	89	109
6. Community Services Cluster	07.0906 09.0107 09.0201	36	21
7. Food Mgmt. & Services	09.0203	7	63
8. Business Data Processing	14.0200	34	161
9. Electronics	16.0108	43	46
10. Electrical	17.1002	67	53
11. Plumbing & Heating	17.1007	36	45
12. Drafting	17.1300	30	12
13. Graphic Arts	17.1900	52	23
14. Metal Fabrication	17.2305	42	17
15. Machine Shop	17.2302	69	81
16. Painting & Decorating	17.1005	8	25
	Total	660	932 *

* NOTE: Total Evening School Enrollment = 1,218
(includes 286 enrolled in Evening Practical Arts)

SOURCE: MISOE CDS Booklet 1.0, Table 1.1

TABLE III

Estimated Total School Expenditures
for 1974-75 School Year

Expenditure Codes			
	Instructional Services		
2100	Total Supervision		$ 10,800
2200	Total Principal's Office		73,588
2300-01	Professional teachers' Salaries	$713,392	
2300-01A	Substitute teachers' Salaries	11,000	
2300-05	Total Supplies	45,822	
2300-Other	Teaching Services	56,950	
2300	Total Teaching Services		827,164
2400	Total Textbooks		8,900
2500	Total Library Services		15,935
2600	Total Audio-Visual Services		6,400
2700	Total Guidance Services		67,453
2800	Total Psychological Services		-
2900	Total Educational TV Services		-
	Total Instructional Services		$1,010,240
	Supportive Services		
1000	Total Administrative Services		98,906
3000	Total Other School Services		152,109
4110	Custodial Services	$ 43,736	
4120	Heating of Buildings	27,900	
4130	Utility Services	48,620	
4210	Maintenance of Grounds	11,820	
4220	Maintenance of Buildings	10,700	
4230	Maintenance of Equipment	20,700	
	Total Operation & Maintenance of Plant Service		163,476
5000	Total Fixed Charges		75,406
	Total Supportive Services		489,897
	Total Current Expenditures (1000-5000 Codes)		$1,500,137
	Other Services		
6000	Total Community Services		13,721
7000	Total Acquisition, Improvement & Replacement of Fixed Assets		52,099
8000	Total Debt Services		310,600
9000	Total Other School Services		-
	Total School Expenditures		$1,876,557

SOURCE: MISOE CDS Reporting Booklet 3.0, Part B, Table 3.2

TABLE IV

Estimated Expenditures for Occupational Day Programs
(Beginning Enrollment = 660)

	Instructional Services	Total Expenses	Direct Expenses	Indirect Expenses
2100	Total Supervision-Occupational	$ 2,200	$ 2,200	$
2100	Total Supervision-Academic	600		600
2200	Total Principal's Office	64,757		64,757
2300-01	Prof. Teaching Salaries-Occup.	479,465	479,465	
2300-01	Prof. Teaching Salaries-Acad.& Other	164,177		164,177
2300-01A	Substitute Teachers' Salaries	11,000		11,000
2300 (Other)	Other Teaching Services	55,500	29,700	25,800
2300-05	Total Supplies	44,472	40,872	3,600
2400	Total Textbooks	8,800		8,800
2500	Total Library Services	15,648		15,648
2600	Total Audio-Visual Services	5,632		5,632
2700	Total Guidance Services	66,239		66,239
	Total Instructional Services	$ 918,490	$552,237	$366,253
	Supportive Services			
1000	Administrative Services	95,162	$	$ 95,162
3000	Other School Services	148,364		148,364
4000	Total Operation & Maintenance of Plant Service	143,629	143,629	
5000	Total Fixed Charges	66,358		66,358
	Total Supportive Services	$ 453,513	$143,629	$309,884
	Total Current Expenditures (1000-5000)	$1,372,003	695,866	676,137
	Total Capital Expenditures	400,386		
	Per Pupil Instructional Cost of Training Beginning Enrollment	1,392		
	Per Pupil Supportive Cost of Training Beginning Enrollment	687		
	Per Pupil Current Cost of Training Beginning Enrollment	2,079		
	Per Pupil Capital Cost-Beginning Enrollment	607		
	Per Pupil Total Cost (Current & Capital Cost)	2,686		

SOURCE: MISOE-CDS Reporting Booklet 3.0, Part B, Table 3.2 (Proration Formula 2)

TABLE V

Estimated Expenditures for Occupational Evening Programs
(Beginning Enrollment = 1,218)

	Instructional Services	Total Expenses	Direct Expenses	Indirect Expenses
2100	Total Supervision	$ 2,000	$	$ 2,000
2200	Total Principal's Office	7,653		7,653
2300-01	Prof. Teaching Salaries	30,250	30,250	
2300-02	Clerical Salaries	1,000		1,000
2300-05	Supplies	250		250
2000 (Other)	Advertising	450		450
2600	Total Audio-Visual Service	667		667
	Total Instructional Services	$ 42,270	$ 30,250	$ 12,020
	Supportive Services			
1000	Total Administrative Services	$ 2,000	$ 0	$ 2,000
4000	Total Operation & Maintenance Plant Services	17,147		17,147
5000	Total Fixed Charges	7,842		7,842
	Total Supportive Services	$ 26,989	$ 0	$ 26,989
	Total Current Expenditures (1000-5000)	$ 69,259	$ 30,250	$ 39,009
	Percent of Total Current Expenditures	100%	43.6%	54.4%
	Total Capital Expenditures	$ 47,365		
	Per Pupil Instructional Cost of Training Beginning Enrollment	34.70		
	Per Pupil Supportive Cost of Training Beginning Enrollment	22.16		
	Per Pupil Current Cost of Training Beginning Enrollment	56.86		
	Per Pupil Capital Cost-Beginning Enrollment	39		
	Per Pupil Total Cost (Current & Capital Cost)	95.86		

SOURCE: MISOE-CDS Reporting Booklet 3.0, Part B, Table 3.2 (Proration Formula 1 & 3)

TABLE V (CONT.)

Estimated Cost of Occupational Evening & E.P.A. Programs

	Occupational Evening	E.P.A.
Per Pupil Instructional Services		
Direct	$ 21.72	$35.00
Indirect (9.86 per pupil)	9.86	9.86
Total	$ 31.58	$44.86
Per Pupil Supportive Services		
Direct	-	-
Indirect	22.16	22.16
Total Per Pupil Current Cost of Training	$ 53.74	$ 67.02
Per Pupil Capital Cost	39.00	39.00
Per Pupil Total Cost of Training	$ 92.74	$106.02

TABLE VI

Estimated Expenditures for
Special Education Programs
(Beginning Enrollment = 17)

	Instructional Services	Total Expenses	Direct Expenses	Indirect Expenses
2100	Total Supervision	6,000	6,000	
2200	Total Principal's Office	1,178		1,178
2300-01	Prof. Teaching Salaries	38,000	38,000	
2300-05	Total Supplies	1,100	1,100	
2400	Total Textbooks	100	100	
2500	Total Library Service	287		287
2600	Total Audio-Visual Services	101		101
2700	Total Guidance Service	1,214		1,214
	Total Instructional Services	47,980	45,200	2,780
	Supportive Services			
1000	Total Administrative Service	1,744		1,744
3000	Total Other School Services	3,745	3,745	
4000	Total Operation & Maint. Plant Service	2,700		2,700
5000	Total Fixed Charges	1,206		1,206
	Total Supportive Services	9,395	3,745	5,650
	Total Current Expenditures (1000-5000)	57,375	48,945	8,430
	% of Total Current Expenditures	100%	85.3%	14.7%
	Total Capital Expenditures	7,272		
	Per Pupil Instr. Cost of Train.- Oct. 1 Enroll.	2,822		
	Per Pupil Support. Cost of Train.- Oct. 1 Enroll.	553		
	Per Pupil Current Cost of Train. - Oct. 1 Enroll.	3,375		
	Per Pupil Capital Cost-Oct 1 Enroll.	428		
	Per Pupil Total Cost (Current & Capital)	3,803		

TABLE VII

Proration Percentages by Program Area for Total School Enrollment

	Special Education Program Area	Occupational Day Program Area	Occupational Evening Program Area	Total
Total Enrollment	17	660	1,218	1,895
Days in School	165	180	25	370
Hours per Day in School	5	6.5	3	14.5
Total Student Contact Hours	14,025	772,200	91,350	877,575
Percent of Total School Contact Hrs.	1.6%	88.0%	10.4%	100.0%

TABLE VIII

Proration Percentages by Program Area for Day School

	Special Education Program Area	Occupational Day Program Area	Occupational Evening Program Area	Total
Total Enrollment	17	660		677
Days in School	165	180		345
Hours per Day in School	5	6.5		11.5
Total Student Contact Hours	14,025	772,200		786,225
Percent of Total School Contact Hrs.	1.8%	98.2%		100.0%

TABLE IX

Instructional Area,
Rooms by Type and Size

Building	Number of Rooms	Floorspace (Sq. Ft.)	% of Total Floorspace
Main Building:			
Academic Rooms	12	8,142	11.3%
Occupational Rooms	9	7,063	9.8%
Occupational Lab/Shops	14	47,177	65.4%
Total	35	62,382	86.5%
Community Center:			
Occupational Lab/Shops	3	1,559	2.2%
Annex Building:			
Occupational Classrooms	3	1,632	2.2%
Occupational Lab/Shops	3	6,576	9.1%
Total	6	8,208	11.3%
Total all Buildings	44	72,149	100.0%

SOURCE: MISOE CDS Reporting Booklet 1.0, Table 1.4

TABLE X

Student Contact Hours by
Building by Program Area

Building		Special Ed. Program	Occupational Day Program	Occupational Even. Prog.	Total Contact Hours	% of Total Contact Hrs.
Main Building	Contact Hours	11,220	686,520	81,150	778,890	88.8
	% of Total Bldg	(1.4)	(88.2)	(10.4)	(100.0)	
Community Center	Contact Hours	-	25,920	1,575	27,495	3.1
	% of Total Bldg	-	(94.3)	(5.7)	(100.0)	
Annex	Contact Hours	2,805	59,760	8,625	71,190	8.1
	% of Total Bldg	(3.9)	(84.0)	(12.1)	(100.0)	
Total Contact Hours		14,025	772,200	91,350	877,575	100.0

TABLE XI

Proration of Operation & Maintenance Plant Service Expenditures by Program Area

Building	Dollars X	% Total Floorspace X	% of Contact Hrs by Program in this Bldg.	Program Area: Special Ed. Program	Program Area: Occupational Day Program	Program Area: Occupational Even. Prog.
Main Building	$163,476	86.5	1.4	$1,980		
	163,476	86.5	88.2		$124,721	
	163,476	86.5	10.4			$14,706
Community Services Bldg.	163,476	2.2	0	-		
	163,476	2.2	94.3		3,391	
	163,476	2.2	5.7			205
Annex	163,476	11.3	3.9	720		
	163,476	11.3	84.0		15.517	
	163,476	11.3	12.1			2,236
Total Operation & Maintenance Plant Service Expenditures				$2,700	$143,629	$17,147

TABLE XII

Occupational Day Program Area -
Cost of Individual Occupational Programs

	ANNEX			COMMUNITY SERVICE BUILDING
	Auto Body 17.0301	Plumb & Heating 17.1007	Paint. & Decorating 17.1005	Community Serv. Cluster 09.0201
October 1 Enrollment	39	36	8	36
Direct Instructional Expenditures-Occupational:				
2300 Total Supervision	$ 100	$ 100	$ -	$ 100
2300-01 Prof. Teaching Salary	25,384	24,311	12,000	43,085
2300 Other Teaching Services	-	-	-	-
2300-05 Total Supplies	1,500	2,000	-	1,400
Total Direct Instructional Expenditures	$26,984	$26,411	$12,000	$44,585
Indirect Instructional Expenditures ($555 per pupil)	21,645	19,980	4,440	19,980
Total Instructional Expenditures	$48,629	$46,391	$16,440	$64,565
Direct Supportive Services:				
4000 Total Operation & Maintenance of Plant Serv.	10,104	9,327	2,073	6,328
Indirect Supportive Services ($469 per pupil)	18,291	16,884	3,752	16,884
Total Supportive Services	$28,395	$26,211	$ 5,825	$23,212
Total Current Expenditures of the Program (1000-5000)	$77,024	$72,602	$22,265	$87,777
Total Capital Expenditures	$23,673	$21,852	$ 4,856	$21,852
Per Pupil Instructional Cost of Train. in Prog.-Oct 1 Enroll.	1,247	1,288	2,055	1,793
Per Pupil Supportive Cost of Train. in Prog.-Oct 1 Enroll.	728	728	728	645
Per Pupil Current Cost of Train. in Prog.-Oct. 1 Enroll.	1,975	2,016	2,783	2,438
Per Pupil Capital Cost of Train. in Prog.-Oct. 1 Enroll.	607	607	607	607
Per Pupil Total Cost of Train. in Prog. (Current & Capital)	$ 2,582	$ 2,623	$ 3,390	$ 3,045

TABLE XII (CONT)

Occupational Day Program Area
Cost of Individual Occupational Programs (Main Building)

	Graphic Arts 17.9000	Metal Fabricating 17.2300	Machine Shop 17.2400	Automotive Mechanics 17.0302
October 1 Enrollment	52	42	69	56
Direct Instructional Expenditures-Occupational:				
2300 Total Supervision	$ 300	$ 100	$ 300	$ 300
2300-01 Prof. Teaching Salary	33,526	26,668	39,319	37,937
2300 Other Teaching Services				
2300-05 Total Supplies	6,000	3,750	3,500	1,500
Total Direct Instructional Expenditures	$39,826	$30,518	$43,119	$39,737
Total Indirect Instructional Expenditures ($555 per pupil)	28,860	23,310	38,296	31,080
Total Instructional Expenditures	$68,686	$53,828	$81,415	$70,817
Direct Supportive Services:				
4000 Total Operation & Maintenance of Plant Service	$11,056	$ 8,930	$14,670	$11,906
Total Indirect Supportive Services ($469 per pupil)	24,388	19,698	32,361	26,264
Total Supportive Services	$35,444	$28,628	$47,031	$38,170
Total Current Expenditures of the Program (1000-5000)	$104,130	$82,456	$128,446	$108,987
Total Capital Expenditures	$ 31,564	$25,494	$ 41,883	$ 33,992
Per Pupil Instructional Cost of Training-Oct. 1 Enroll.	$ 1,321	$ 1,282	$ 1,180	$ 1,265
Per Pupil Supportive Cost of Training-Oct. 1 Enroll.	682	682	682	682
Per Pupil Current Cost of Training-(Instructional & Supp.)	2,003	1,964	1,862	1,947
Per Pupil Capital Cost of Training-Oct. 1 Enroll.	607	607	607	607
Total Per Pupil Cost of Training (Current & Capital)	$ 2,610	$ 2,571	$ 2,469	$ 2,554

TABLE XII (CONT)

Occupational Day Program Area
Cost of Individual Occupational Programs (Main Building)

	Commercial Arts 17.0700	General Merchandising 04.0800	Carpentry 17.1001	Food Mgmt. & Service 90.0203
October 1 Enrollment	36	16	89	7
Direct Instructional Expenditures-Occupational:				
2300 Total Supervision	$ 100	$	$ 300	$
2300-01 Prof. Teaching Salary	32,373	14,015	47,278	12,000
2300 Other Teaching Services				
2300-05 Total Supplies	900	1,100	6,622	2,500
Total Direct Instructional Expenditures	$33,373	$15,115	$54,200	$14,500
Total Indirect Instructional Expenditures ($555 per pupil)	19,980	8,880	49,395	3,885
Total Instructional Expenditures	$53,353	$23,995	$103,595	$18,385
Direct Supportive Services:				
4000 Total Operation & Maintenance of Plant Service	$ 7,654	$ 3,402	$ 18,922	$ 1,488
Total Indirect Supportive Services ($469 per pupil)	16,884	7,504	41,741	3,283
Total Supportive Services	$24,538	$10,906	$ 60,663	$ 4,771
Total Current Expenditures of the Program (1000-5000)	$77,891	$34,901	$164,258	$23,156
Total Capital Expenditures	$21,852	$ 9,712	$ 54,023	$ 4,249
Per Pupil Instructional Cost of Training-Oct. 1 Enroll.	$ 1,482	$ 1,499	$ 1,164	$ 2,626
Per Pupil Supportive Cost of Training-Oct. 1 Enroll.	682	682	682	682
Per Pupil Current Cost of Training-(Instructional & Supp.)	2,164	2,181	1,846	3,308
Per Pupil Capital Cost of Training-Oct. 1 Enroll.	607	607	607	607
Total Per Pupil Cost of Training (Current & Capital)	$ 2,771	$ 2,788	$ 2,453	$ 3,915

TABLE XII (CONT)

Occupational Day Program Area
Cost of Individual Occupational Programs (Main Building)

	Data Processing Systems 14.0200	Electronics 16.0108	Electricity 17.1002	Drafting 17.1300
October 1 Enrollment	34	43	67	30
Direct Instructional Expenditures-Occupational:				
2300 Total Supervision	$	$ 100	$ 300	$ 100
2300-01 Prof. Teaching Salary	40,632	25,936	38,290	26,709
2300 Other Teaching Services	27,700			
2300-05 Total Supplies	1,500	3,400	4,000	1,200
Total Direct Instructional Expenditures	$71,832	$29,436	$42,590	$28,009
Total Indirect Instructional Expenditures ($555 per pupil)	18,870	23,865	37,185	16,650
Total Instructional Expenditures	$90,702	$53,301	$79,775	$44,659
Direct Supportive Services:				
4000 Total Operation & Maintenance of Plant Service	$ 7,229	$ 9,142	$14,255	$ 6,378
Total Indirect Supportive Services ($469 per pupil)	15,946	20,167	31,423	14,070
Total Supportive Services	$23,175	$29,309	$45,678	$20,448
Total Current Expenditures of the Program (1000-5000)	$113,877	$82,610	$125,453	$65,107
Total Capital Expenditures	$ 20,638	$26,101	$ 40,669	$18,210
Per Pupil Instructional Cost of Training-Oct. 1 Enroll.	$ 2,667	$ 1,239	$ 1,190	$ 1,488
Per Pupil Supportive Cost of Training-Oct. 1 Enroll.	682	682	682	682
Per Pupil Current Cost of Training-(Instructional & Supp.)	3,349	1,921	1,872	2,170
Per Pupil Capital Cost of Training-Oct. 1 Enroll.	607	607	607	607
Total Per Pupil Cost of Training (Current & Capital)	$ 3,956	$ 2,528	$ 2,479	$ 2,777

TABLE XIII

Comparison of Per Pupil
Costs for Program Areas

	Occupational Day	Occupational Evening	Special Education
1. Enrollment	660	932	17
2. Instructional	$1,392	$32	$2,822
3. Supportive	$ 687	$22	$ 533
4. Current (2 & 3)	$2,079	$54	$3,375
5. Capital	$ 607	$39	$ 428
6. Total (4 & 5)	$2,687	$93	$3,803